

CA1

**NANYANG PRIMARY SCHOOL
FIRST CONTINUAL ASSESSMENT 2005
MATHEMATICS
PRIMARY SIX**

Name: _____ () Marks : /100

Class: Primary 6 ()

Parent's Signature

Date: 3 March 2005

Duration: 2 h 15 min

Section A

Questions 1 to 5 carry one mark each. Questions 6 to 15 carry two marks each.

For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(Total: 25 marks)

1. Which one of the following statements is correct?

(1) $2n + 5 = 7n$

(2) $2n + 5 = n \times n + 5$

(3) $2n + 5 = 2 + n + 5$

(4) $2n + 5 = n + n + 5$

2. Express 32 g as a ratio of 0.16 kg.

(1) 1 : 5

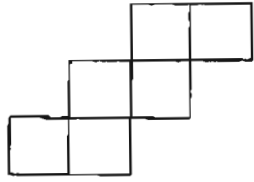
(2) 2 : 1

(3) 5 : 1

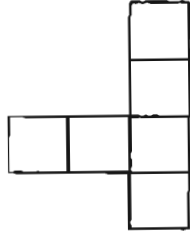
(4) 200 : 1

3. Which one of the following nets cannot be folded into a cube?

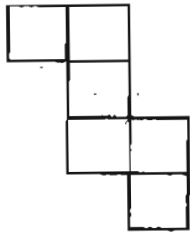
(1)



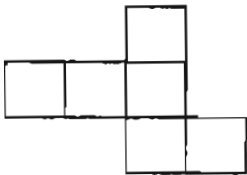
(2)



(3)



(4)



4. Find the value of $128 - 86 \div 2 + 7 \times (24 - 15)$.

(1) 84

(2) 148

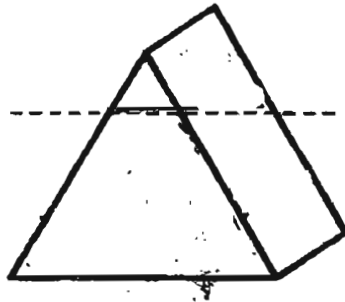
(3) 174

(4) 238

5. What is the quotient when 22 639 is divided by 25?

- (1) 14
- (2) 95
- (3) 905
- (4) 950

6. If one of the corners of the prism is cut off as shown below, how many edges would there be in the new shape?



- (1) 5
- (2) 6
- (3) 9
- (4) 12

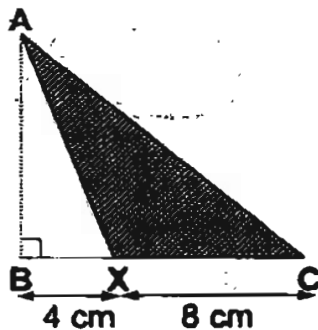
7. 8 years ago, the ratio of Mr Tan's age to his son's age was 8 : 1. Now, the ratio of Mr Tan's age to his son's age is 10 : 3. How old will his son be in 6 years' time?

- (1) 17 years old
- (2) 18 years old
- (3) 19 years old
- (4) 20 years old

8. Minghua gave $\frac{2}{5}$ of his marbles to his sister. Then he divided the remainder equally among his 4 friends. If each friend received 12 marbles, how many marbles did Minghua have at first?

- (1) 20
- (2) 48
- (3) 80
- (4) 120

9. The area of Triangle ABC is 60 cm^2 . What is the area of the shaded Triangle AXC?



- (1) 50 cm^2
 - (2) 40 cm^2
 - (3) 20 cm^2
 - (4) 10 cm^2
10. Mr Bala is facing North-West. If he turns in an anticlockwise direction till he faces East, what is the angle he would have turned?
- (1) 45°
 - (2) 135°
 - (3) 225°
 - (4) 315°

11. A piece of ribbon measuring 714 m was cut by a machine into 7 000 equal pieces. What was the length of each piece of ribbon?
- (1) 0.102 cm
 - (2) 1.02 cm
 - (3) 10.2 cm
 - (4) 102 cm

12. Edmund has \$8 700 in his savings bank. The interest rate is 2% per year. How much money will he have in the bank after 1 year?
- (1) 174
 - (2) 8 874
 - (3) 10 440
 - (4) 17 400

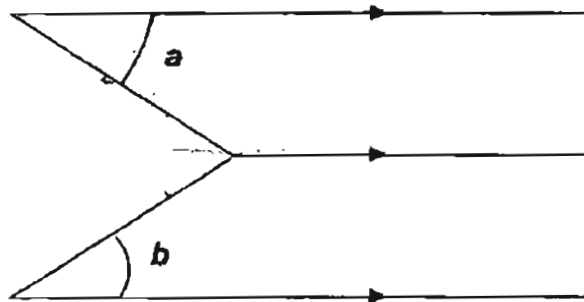
13. The table below shows the postage rates for sending magazines to Australia.

Weight step not over	Postage
20 g	\$0.70
50 g	\$1.00
Per additional step of 50 g	\$0.80

Find the postage for a magazine which weighs 235 g.

- (1) \$3.40
- (2) \$4.00
- (3) \$4.20
- (4) \$4.90

14. Look at the figure below.



Which one of the following statements is correct?

- (1) $\angle c = 360^\circ - \angle a - \angle b$
- (2) $\angle c = \angle a + \angle b$
- (3) $\angle c = \angle b - \angle a$
- (4) $\angle c = 180^\circ - \angle a - \angle b$

15. A drawer is 50 cm long, 30 cm wide and 10 cm high. What is the maximum number of 3-cm cubes that can be put into the drawer?

- (1) 480
- (2) 510
- (3) 555
- (4) 556

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Section B

Questions 16 to 35 carry 1 mark each. Write your answers in the spaces provided. Give your answers in the units stated.

(Total: 20 marks)

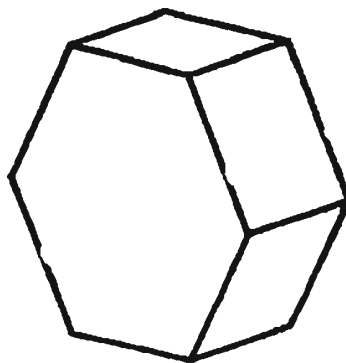
16. Find the value of the following expression when $x = 6$.

Answer: _____

17. Jerome bought $6m$ pencils. He gave 5 pencils to each of his friends and had 7 pencils left. Express the number of friends Jerome had in terms of m .

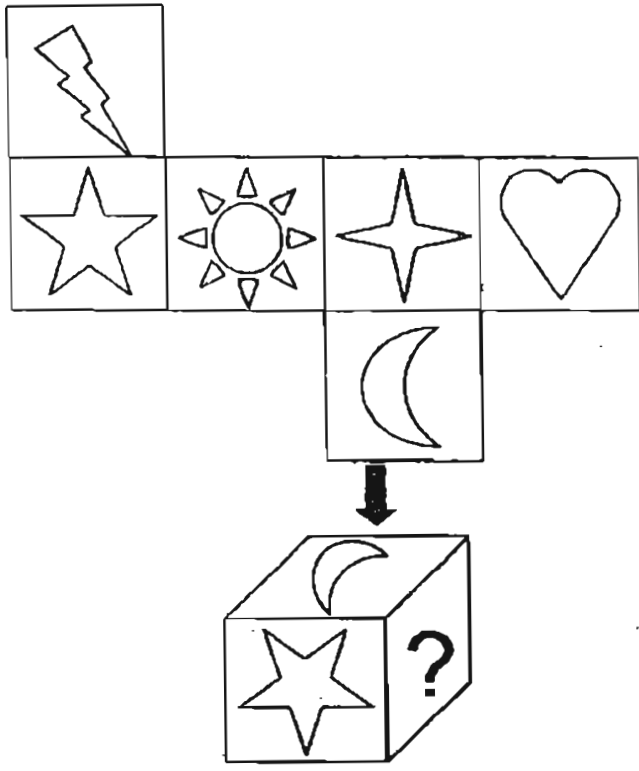
Answer: _____

18. How many faces does the solid below have?



Answer: _____

19. The net below is folded into the cube:



Draw the shape according to how it would appear on the face of the cube indicated by the question mark (?).

Answer: _____

20. If Peter weighs $2\frac{3}{4}$ times as much as May, find the ratio of May's weight to their total weight.

Answer: _____



21. The ratio of the original length of Candle P to the original length of Candle Q is 3 : 8. Candle P can last 9 hours. When Candle P and are lit at the same time, the 2 candles have equal lengths remaining after 3 hours. How long can Candle Q last?

Answer: _____ h

22. If $15 : 2.5 = A : 1$, what is the value of A?

Answer: _____

23. What is the missing number?

$$2\,000 \div 36 = 5 \times \underline{\hspace{2cm}} \div 9$$

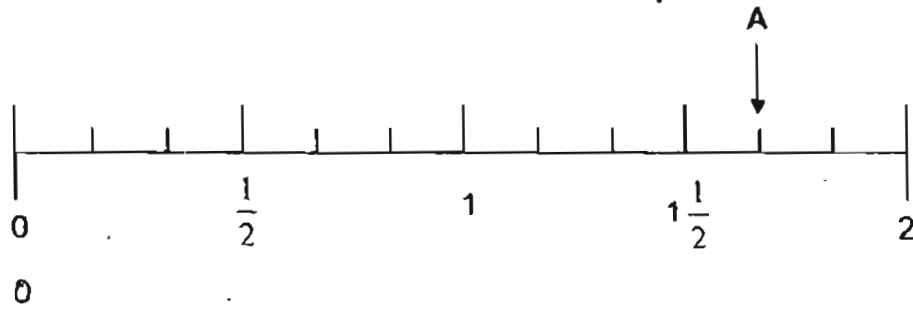
Answer: _____

24. What are the values of A and B?

$$\begin{array}{r}
 1 \boxed{A} 2 9 \\
 \times \boxed{B} 7 \\
 \hline
 7 2 0 3 \\
 + 4 1 1 6 0 \\
 \hline
 4 8 3 6 3
 \end{array}$$

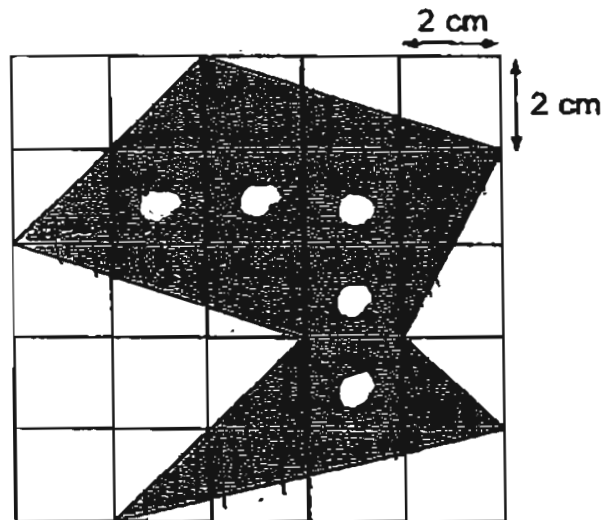
Answer: A = _____ B = _____

25. Write the fraction represented by the letter A in its simplest form.



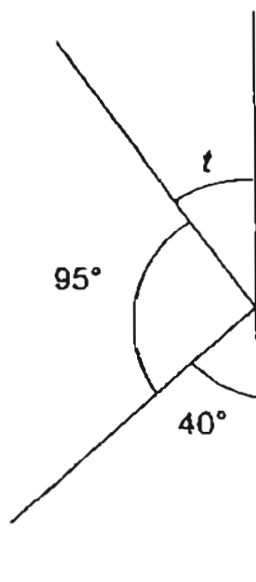
Answer: _____

26. Find the area of the shaded figure.



Answer: _____ cm^2

27. The following diagram is not drawn to scale. Find $\angle t$.



Answer: _____

28. Mrs Wong mixed 4.56 l of orange squash with three times as much water. She poured the mixture into 10 bottles. How much of the mixture was there in each bottle? Give your answer in litres correct to 2 decimal places.

Answer: _____

29. Express $\frac{32}{160}$ as a percentage.

Answer: _____ %

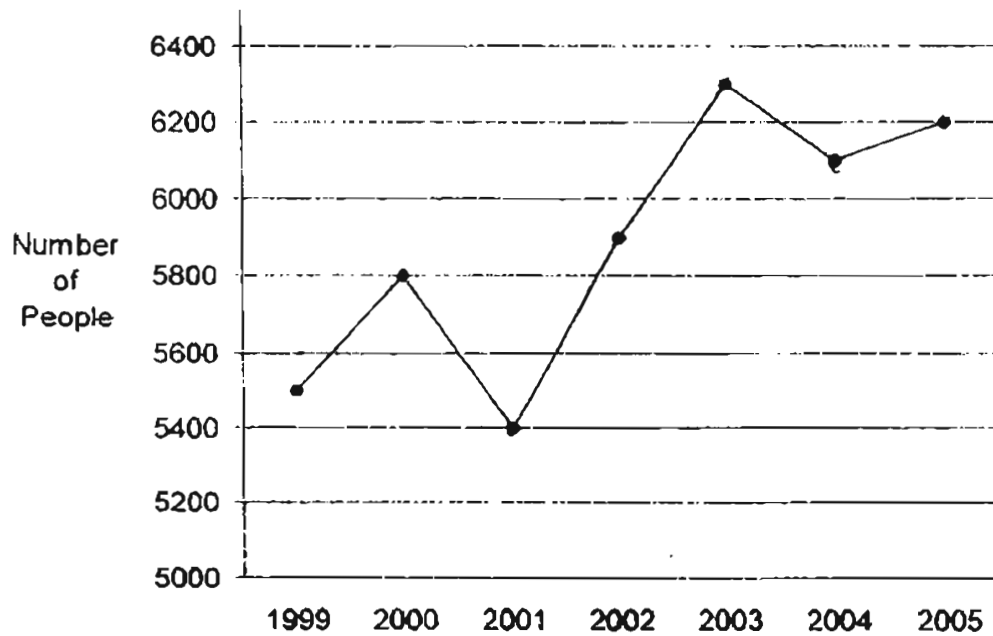
30. The average height of Ali, Bill, Chelsea and Devi is 152 cm. If Ali's height is 157 cm and Chelsea's height is 148 cm, what is the average height of Bill and Devi?

Answer: _____ cm

31. A printer can print 16 copies in 48 seconds. At this rate, how many copies can it print in 1 minute?

Answer: _____

32. The line graph below shows the population of a town from 1999 to 2005.



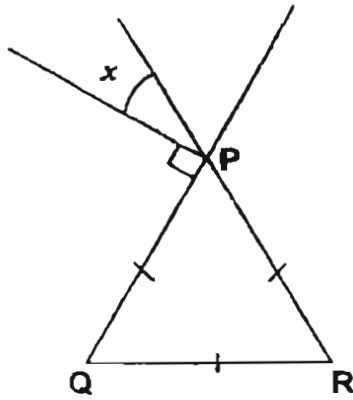
In which year was there an overall increase of 400 people in the population of the town as compared to the previous year?

Answer: _____

33. A rectangular tank 40 cm long and 28 cm wide contained a stone and water to a depth of 13 cm. The stone was completely submerged in the water. When the stone was taken out, the water level dropped by 3 cm. Find the volume of the water in the tank.

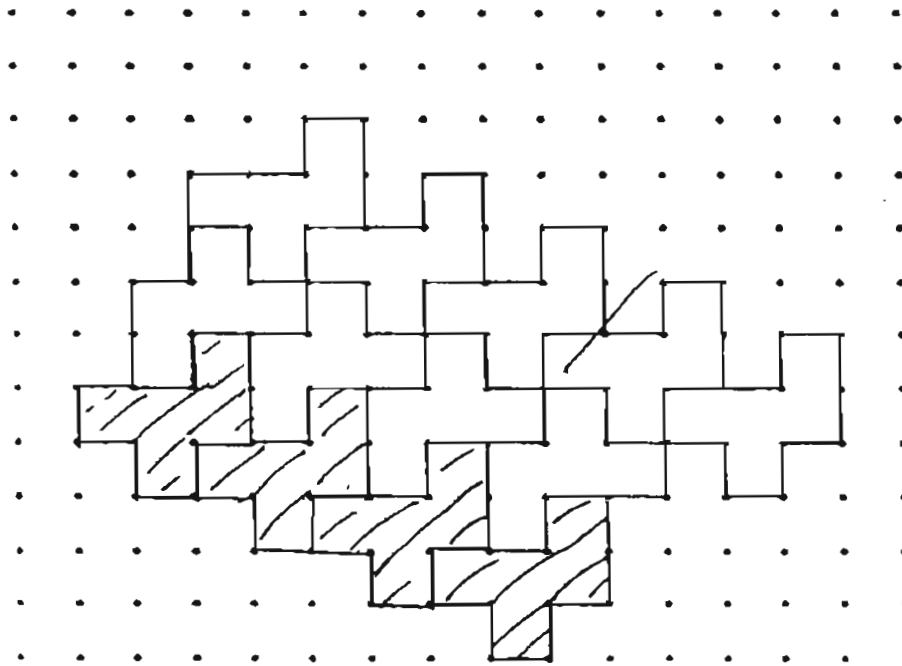
Answer: _____

34. In the figure shown below, PQR is an equilateral triangle. Find $\angle x$.



Answer: _____ °

35. The pattern in the box shows part of a tessellation. Extend the tessellation by drawing 4 unit shapes in the space provided.



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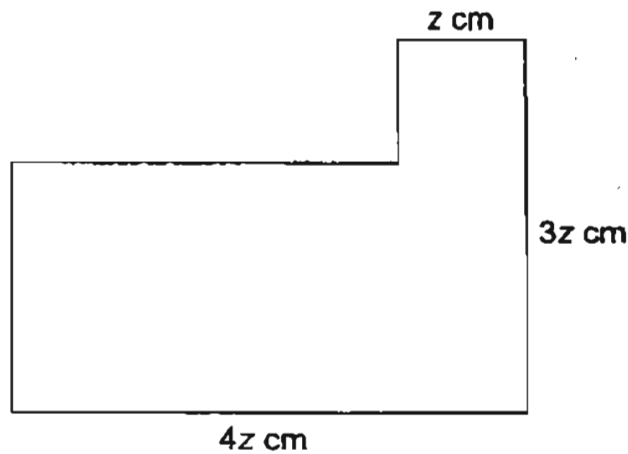
Section C

For questions 36 to 50, show your working clearly in the space below each question and write your answers in the space provided.

The number of marks available is shown in brackets [] at the end of each question or part-question.

(Total: 55 marks)

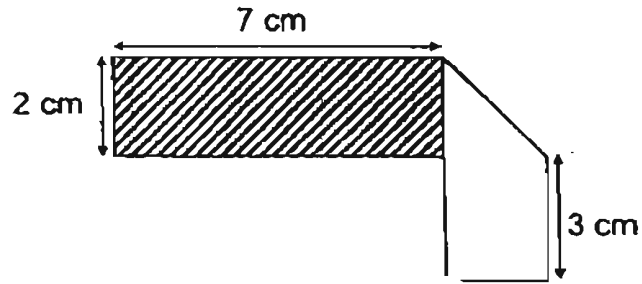
36. The figure below is made up of a rectangle and a square.



Express the perimeter of the figure in terms of z in the simplest form.

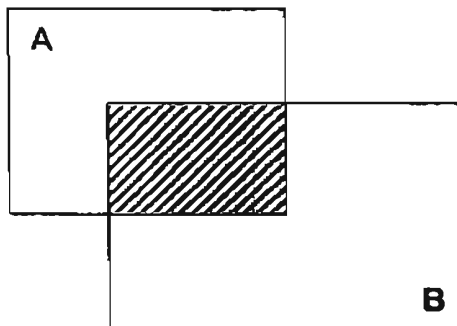
Answer: _____ [2]

37. A rectangular piece of paper was folded on one side as shown in the diagram below. Find the perimeter of the piece of paper before it was folded.



Answer: _____ [2]

38. A and B are 2 rectangles which overlap each other as shown in the diagram below. If $\frac{2}{5}$ of A and 25% of B is shaded, find the ratio of the unshaded area of A to the unshaded area of B.

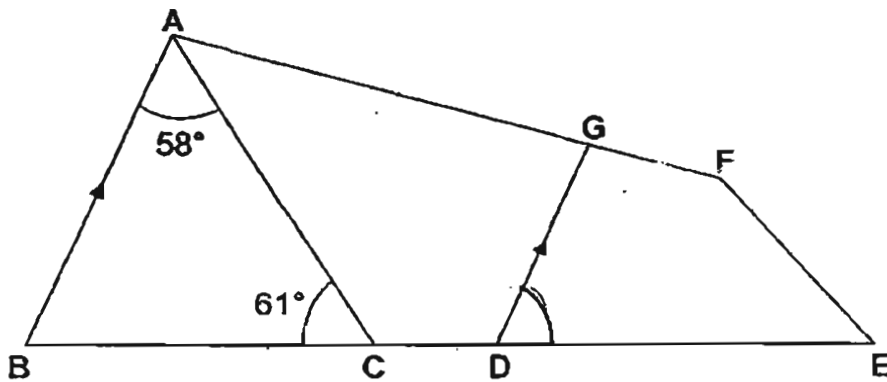


Answer: _____ [2]

39. Mr Chan spent \$377.80 on some dictionaries and story books. He bought 6 more story books than dictionaries. A dictionary cost \$28.70 and a story book cost \$21.30. How many dictionaries did he buy?

Answer: _____ [3]

40. The following figure is not drawn to scale. AB is parallel to GD.



- (a) Name a trapezium from the figure above.
- (b) Find $\angle GDE$.

Answer: (a) _____ [1]

(b) _____ [2]

41. The following table shows the amount of money Lynn saved from January to May.

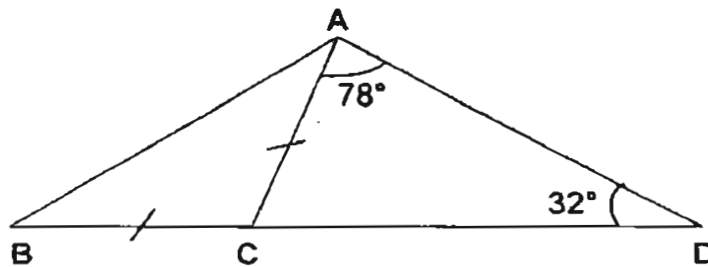
Month	January	February	March	April	May
Savings (\$)	250	300	280	200	270

- (a) What is her average savings for the 5 months?
- (b) If she wants to increase her average savings by \$10, how much must she save for the month of June?

Answer: (a) _____ [1]

(b) _____ [2]

42. ABC is an isosceles triangle where $BC = AC$. Find $\angle ABC$.

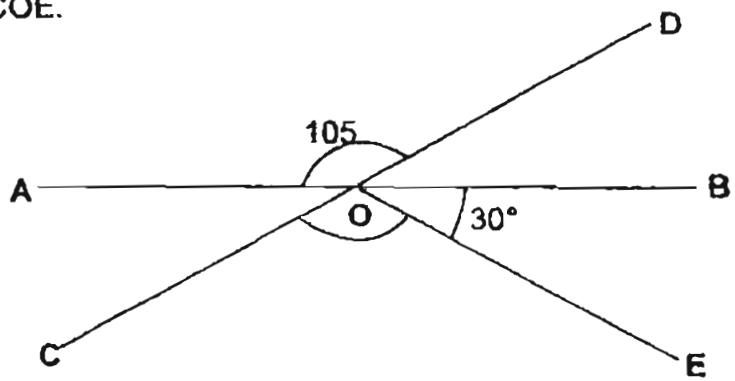


Answer: _____ [4]

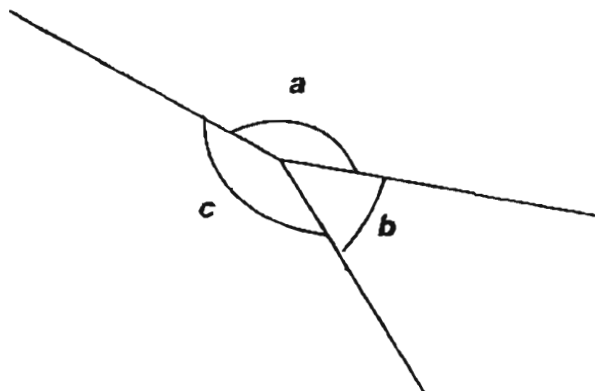
43. The pages of a book are numbered 1 to 99. Find the difference between the sum of all the odd pages and the sum of all the even pages.

Answer: _____ [4]

- 44a. In the diagram below, AB and CD are straight lines intersecting at O. Find $\angle COE$.



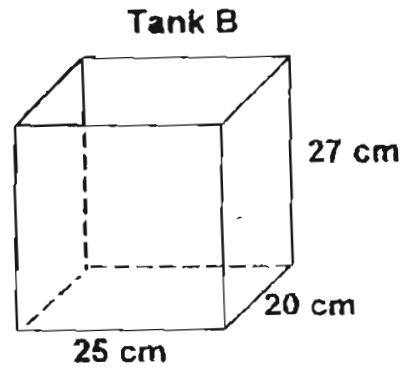
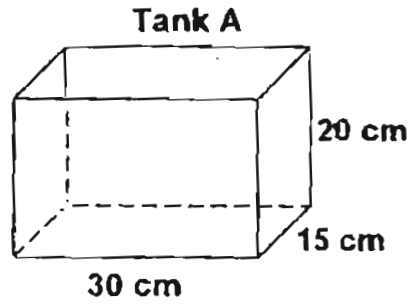
- 44b. In the diagram below, $\angle b = 55^\circ$. If the size of $\angle a$ is 3 times the size of $\angle b$, find $\angle c$.



Answer: (a) _____ [2]

(b) _____ [2]

45. Roy pours twice as much water into Tank A as Tank B.



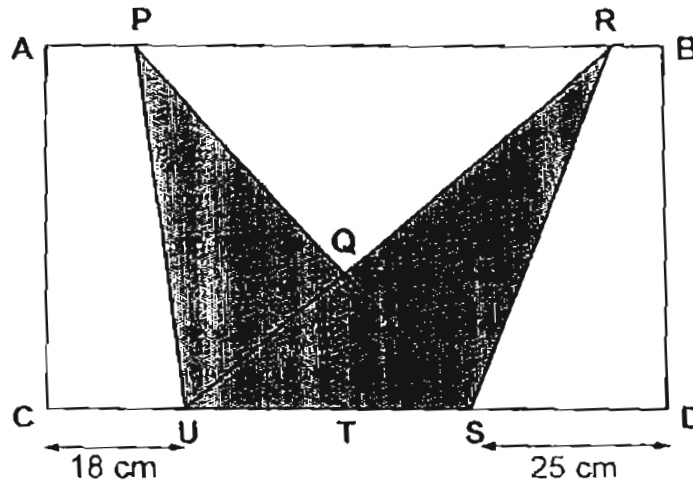
If Tank A is filled to the brim, what fraction of Tank B will be filled?

Answer _____ [4]

46. Sharon spent $\frac{1}{3}$ of her money on pencils and $\frac{5}{8}$ of her remaining money on 2 bottles of glitter glue. Each bottle of glitter glue cost 5 times as much as a pencil. How many pencils did she buy?

Answer: _____ [4]

47. ABCD is a rectangle 75 cm by 40 cm.
 The figure PQRSU is formed by overlapping 2 triangles in a certain way.
 If QT is 15 cm, find the total area of the unshaded parts.



Answer _____ [5]

48. A factory employed 250 workers last year to manufacture 343 750 bags. This year, the number of workers is reduced by 20% while the production of bags is increased by 60%. How many bags must each worker produce on the average this year?

Answer _____ [5]

49. $\frac{2}{5}$ of Raju's money is equal to $1\frac{1}{2}$ of Carl's money. When Raju spent \$450 and Carl received \$120, the ratio of Raju's money to Carl's money became 5 : 2. How much money did Raju have at first?

Answer _____ [5]

50. Mr Smith had 1.5 l of white paint in Tin A and 1.25 l of red paint in Tin B. He poured 750 ml of red paint from Tin B into Tin A. Then he poured some of the mixture in Tin A back into Tin B. If $\frac{7}{11}$ of the final mixture in Tin B was made up of red paint, what was the volume of the mixture in Tin A that Mr Smith had poured into Tin B?

Answer: [5]

☺ *End of Paper* ☺

Please Check Carefully

Settlers: Ms Chan Lee Shan
Ms Yee Ming Ming

CAT

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FIRST CONTINUAL ASSESSMENT 2005
MATHEMATICS
PRIMARY SIX

- 1) 4
- 2) 1
- 3) 2
- 4) 2
- 5) 3
- 6) 4
- 7) 2
- 8) 3
- 9) 2
- 10) 3
- 11) 3
- 12) 2
- 13) 3
- 14) 2
- 15) 1
- 16) 12
- 17) $\frac{6m - 7}{5}$
- 18) 8
- 19)
- 20) 4 : 15
- 21) 4
- 22) 6
- 23) 100
- 24) a = 0 B = 4
- 25) 1 $\frac{2}{3}$
- 26) 50
- 27) 45
- 28) 1.82
- 29) 20%
- 30) 151.5
- 31) 20
- 32) 2003
- 33) 11.2
- 34) 30
- 35)
- 36) 14z cm
- 37) 28 cm
- 38) 1 : 2
- 39) 5 dictionaries
- 40) a) ABDG b) 61°
- 41) a) \$ 260 b) \$ 320
- 42) 35°
- 43) 50 pages
- 44) a) 75° b) 140°
- 45) 1/3 of tank B will be filled
- 46) 8 pencils
- 47) 1960 cm²
- 48) 2750 bags
- 49) \$ 2250
- 50) 600 ml